

Abstract

An X-ray optical system comprising an X-ray source (1), from which X-ray radiation (2) is guided to a sample (4) under investigation, and an X-ray detector (7) for receiving radiation (5) diffracted or scattered from the sample (4), wherein a beam-guiding X-ray optical element (3, 6), such as e.g. a collimator, a mono- or polycapillary, an X-ray mirror or a monochromator, is disposed between the source (1) and the sample (4) and/or between the sample (4) and the detector (7), is characterized in that a wobble means is provided for moving the X-ray optical element (3, 6) in an oscillating fashion during the measurement. The inventive X-ray optical system obtains averaged X-ray analysis information from objects under investigation having large mass which consist of macrocrystalline material without destroying or accelerating the object under investigation.